

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/12/2007 has been entered.

***Response to Arguments***

2. Applicant's arguments with respect to claims 15, 17-43 have been considered but are moot in view of the new ground(s) of rejection.

Claims 1-14, 16 have been canceled.

***Claim Objections***

3. Claim 19, 34-35 are objected to because of the following informalities:

Claim 19, line 4, recites “sequentially server” should be replaced as –  
sequentially serve—

In claim 34, the reference “(i)” in line 3 is repeated.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 15, 17-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15 recites the limitation "said subscriber terminal" in line 12. There is insufficient antecedent basis for this limitation in the claim. This limitation is analyzed as best understood as a subscriber terminal --

Claim 15 recites the limitation "said subscriber terminal device" in line 18. There is insufficient antecedent basis for this limitation in the claim. This limitation is analyzed as best understood as a subscriber terminal device --

Claims 17-18 recite the limitation "said step of managing said plurality of data items further comprises" in lines 1-2.

Claims 18 recites the limitation "said prioritized information segments..." in lines 3-4.

There is insufficient antecedent basis for these limitations in the claims. These limitations are respectively analyzed as best understood that -- step of managing a plurality of data items comprises --; and --prioritized information segments --

Claim 20 recites the limitation "said step of scheduling" in line 1. There is insufficient antecedent basis for this limitation in the claim. This limitation is analyzed as best understood as step of scheduling--

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 15, 17-34, 36-43 are rejected under 35 U.S.C. 102(e) as being anticipated by Hendricks et al. (US 6,201,536 B1) – hereinafter referred to as H536. (Note: H536 is CIP of Pat. No. 5,600,364 (hereinafter referred to as H364) and CIP of Pat. No. 5,798,785 (hereinafter referred to as H785) and incorporated by references: Ser. No. 08/160,282, filed Dec. 2, 1993, now, Pat. 5,659,350 (hereinafter referred to as H350); Ser. No. 08/160,193, filed Dec. 2, 1993, now, Pat. No. 5,734,853 (hereinafter referred to as H853 ); Ser. No. 08/160,283, filed Dec. 2, 1993, now, Pat. No. 5,682,195 (hereinafter referred to as H195); U.S ser. No. 08/160,191, filed Dec. 2, 1993, now U.S Pat. No. 5,559,549 (hereinafter referred to as H549) – see col. 1, lines 5-39).

Regarding claim 15, H536 disclose a method of providing a subscriber with program information regarding a plurality of concurrently broadcast programs in a data distribution system (providing subscriber with program control information including program title, channel, time, or advertisement information, etc. regarding a plurality of concurrently broadcast programs in a delivery system – see include, but is not limited to, figures 1-6a, 7-9, col. 8, lines 30-54) which comprises a multimedia broadcast medium which concurrently carries a plurality of program, which are made available to a plurality of subscribers, which are connected to the multimedia broadcast medium via respective terminal adapters which contain a directory member (see include, but are not limited to, figures 1-6a, 7-9, H364: figures 1-2), comprising the steps of:

storing an entirety of directory information in a memory located in the multimedia broadcast medium (storing all information of program in a memory such as internal storage in operations center (see H364: col. 8, lines 39-45) or at the file server 215 or database 262 in cable head end – see include, but are not limited to, figure 3a, col. 9, line 50-col. 10, line 6, col. 12, lines 28-49 );

generating subscriber interest profile data which is indicative of ones of the concurrently broadcast programs which are likely to be of interest to a subscriber at the subscriber terminal associated with the subscriber (user interest profile data in user request for VOD programs, NVOD programs , menu, program suggestion, custom menu, etc. or in user personal profile – see include, but are not limited to, figures 3b,3c, col. 4, lines 1-64, col. 11, lines 1-13, col. 13, line 11-col. 14, line 65, col. 35, line 21-col. 36, line 56);

utilizing the subscriber interest profile data, excerpting a subscriber specific subset of directory information from the directory information stored in the memory (retrieving the requested menu, requested programs, advertisements based on user profile, or user request, see include, but are not limited to, figures 3b,3c, col. 4, lines 1-64, col. 11, lines 1-13, col. 13, line 11-col. 14, line 65, col. 35, line 21-col. 36, line 56);

transmitting the excerpted directory information to the terminal adapter memory for storage therein (transmitting requested programs, suggestion menu, or custom menu, etc. to set top terminal memory for storage therein – see include, but are not limited to, col. 23, lines 50-60) ; and

enabling a subscriber at the subscriber terminal device to access the excerpted directory information stored in the terminal adapter memory (subscriber at the set top terminal is able to select a program title, channel, etc. on the display menu at the set top terminal– see include, but are not limited to, figures 6c, 11, and H364: figures8a-8c, figure 17) .

Regarding claim 17, H536 discloses a method as discussed in the rejection of claim 15. H536 further discloses step of managing plurality of data items further comprising:

calculating, in response to the subscriber accessing ones of the plurality of broadcast programs, similarity measures to identify other likely broadcast programs of interest to the subscriber (determining programs/suggestion menu/custom menu, etc. to be suggested/provided to the user according to user request, or watched programs or

user viewing habits, etc. – see include, but are not limited to, figures 3b,3c, col. 4, lines 1-64, col. 11, lines 1-13, col. 13, line 11-col. 14, line 65, col. 35, line 21-col. 36, line 56).

Regarding claim 18, H536 discloses a method as discussed in the rejection of claim 15. H534 further discloses managing the plurality of data items comprising searching, in response to user interest profile data, the prioritized information segments of all of the data items to identifying a selected data item which most likely corresponds to the user interest profile data (searching and providing information all contents with the same category, time period, channels, actors, etc. that correspond to/match user request/user profile) see include, but are not limited to, col. 9, line 57-col. 10, line 6, col. 11, lines 4-13, col. 13, line 32-col. 15, line H364: col. 38, line 30-col. 39, line 52, col. 18, lines 30-59; H785: figures 11a-13b) .

Regarding claim 19, H536 further discloses scheduling activation of the step of transmitting the excerpted directory information to sequentially serve and the plurality of subscriber terminals according to a determined priority schedule (using information in scheduling database and other databases to provide the program control information, advertisements in sequence based on time frame, ranking, or requests to plurality of set top terminals– see include, but are not limited to, H534: col. 14, lines 33-41, col. 14, line 53-col. 30, col. 22, line 40-col. 23, line 15, col. 27, line 1-67, col. 29, line 15-60, col. 35, lines 28-65; H364: figures 11-12, col. 18, line 15-59, col. 23, line 45-col. 24, line 40, col.

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26, line 62-col. 27, line 49, col. 31, lines 9-21, col. 34, lines 40-56, col. 35, lines 55-65, col. 38, line 45-col. 39, line 52 ).

Regarding claim 20, H536 discloses a method as discussed in the rejection of claim 18. H364 further discloses the step of scheduling comprises deciding what excerpted directory information is most likely usefully broadcast to each of the plurality of subscriber terminals (see include, but are not limited to, col. 29, lines 17-60, col. 35, line 28-col. 36, line 56; H364: col. 36, line 39-col. 37, line 12, col. 38, line 30-col. 39, line 52).

Regarding claim 21, H536 discloses a method of optimizing communication, comprising:

- providing at least one data source of a plurality of target object data items (providing at least one data source such as external source, operations center, local content source, and/or cable head end source – see include, but are not limited to, figures 1-8);
- providing a plurality of data terminals, each assigned to a particular one of a plurality of users (providing a plurality of set top terminal, each assigned to particular subscriber associated with the set top terminal – see include, but are not limited to, figures 1-8);
- interconnecting the at least one of source and the plurality of data terminals over a communication medium (see include, but are not limited to, figure 1-8);

automatically generating user interest profile data for each of the plurality of user which indicates which particular ones of the plurality of target object data items are likely to be of interest of each of the plurality of user (using software to generate user interest profile data for each user (either in user request or user profile/preferences) which indicates data items are likely to be interest to the user – see include, but are not limited to, col. 14, lines 53-65, col. 15, lines 9-30, col. 25, lines 1-20, col. 26, line 38-col. 27, line 67, col. 35, line 26-col. 36, line 56);

searching, utilizing the user interest profile data, the plurality of target object data items to identify for each of the plurality of users at least one of the plurality of target object data items which most likely corresponds to the user interest profile data (see include, but are not limited to, col. 14, lines 53-65, col. 15, lines 9-30, col. 25, lines 1-20, col. 26, line 38-col. 27, line 67, col. 35, line 26-col. 36, line 56);

delivering to the plurality of data terminals particular ones of the plurality of target object data items over a plurality of alternative virtual channels prioritized in a manner based upon the results of the step of searching (see include, but are not limited to, see include, but are not limited to, col. 14, lines 53-65, col. 15, lines 9-30, col. 25, lines 1-20, col. 26, line 38-col. 27, line 67, col. 35, line 26-col. 36, line 56).

Regarding claim 22, H536 discloses a method as discussed in the rejection of claim 21. H536 further discloses the plurality of target object data items comprises at least one of: multimedia information; data items which are divided into a plurality of information segments (e.g., category, sub-category, or title, or promotion, time slot, video segments,

etc. – see include, but are not limited to, col. 8, lines 32-52) video content; MPEG-compressed of video (see include, but are not limited to, col. 7, lines 54-57, col. 9, lines 39-52)

Regarding claim 23, H536 discloses a method as discussed in the rejection of claim 21. H536 further discloses the data terminals comprise a set top boxes (set top terminals – see include, but are not limited to, figures 1, 4-6a, 7-8).

Regarding claim 24, H536 discloses a method as discussed in the rejection of claim 21. H536 further discloses the communication medium comprises at least one of: a cable television system; a digital broadcast system, a video-on demand system (see include, but are not limited to, figures 1-8, col. 4, lines 1-14).

Regarding claim 25, H536 discloses a method as discussed in the rejection of claim 21. H536 further discloses the user interest profile data is maintained in the data terminal (user profile data including, program access information, is stored in storage device at set top terminal – see include, but are not limited to, H364: col. 12, lines col. 18, lines 42-58, col. 26, line 27-col. 27, line 49, col. 29, line 60-col. 30, line 49; H789: col. 33, line 15-col. 34, line 28).

Regarding claim 26, H536 discloses a method as discussed in the rejection of claim 21. H536 further discloses providing a processor in each of the data terminals (e.g.,

microprocessor in each set top terminals for controlling operations of the set top terminal – see include, but are not limited to, col. 23, lines 45-60, H785: figure 4);

utilizing the processor to select a plurality of data items as corresponding to the user interest profile during the step of search, and to assign data items to virtual channels for consideration by the users (utilizing the microprocessor to select a plurality of data items as corresponding to the user interest profile data either based on user request or in the user profile/preference during the search and assign data items to virtual channel for displaying in the menu for consider by the – see include, but are not limited to, figures 3b-3c, 6b, col. 23, lines 50-60, col. 29, line 15-col. 30, line 30, col. 33, line 20-24, col. 35, line 1-col. 36, line 57; H785, figures 4, 8-9c, 11a-13b).

Regarding claim 27, H536 discloses a method as discussed in the rejection of claim 21. H536 further discloses rank/sort program control information and other content for display based on matching between program control information and user interest profile data in user profile (see include, but are not limited to, col. 23, lines 45-60, col. 29, line 40-col. 30, line 5, col. 35, line 26-col. 36, line 56; H364: col. 18, line 30-col. 21, line 12, col. 30, line 15-49, col. 34, line 40-col. 36, line 42-52, col. 37, line 1-12, col. 39, lines 31-52; H785: figures 4, 11a-11e, 13a-13b). Thus, the processor is inherently compares directory information (e.g., program control information, advertisement information) associated with each of the plurality of target data items to user interest profile data (in user profile) during the searching to determine whether there is

correspondence so that the program control information or advertisement is displayed based on the correspondence/matching.

Regarding claim 28, H536 discloses a method as discussed in the rejection of claim 21. H536 further discloses collecting target data use information, such as viewing habit data, and transmitting it through communication medium for use in refining the user interest profile data (collecting accessed/watched program information and transmitting through communication medium to head end or operation center for use to update/refine user interest profile data in user profile – see include, but are not limited to, col. 26, line 6-col. 27, line 43; H364: col. 26, line 12-col. 27, line 47, col. 29, line 30-col. 31, line 63, col. 33, lines 12-25, col. 34, lines 25-65, col. 36, lines 1-67).

Regarding claim 29, H536 discloses a method as discussed in the rejection of claim 21. H536 further discloses providing at least one data source a directory of descriptive information for the plurality of target object data items (operations center or head end provides program control information include program title, channel, etc. of the video program, advertisements, etc. – see include, but are not limited to, col. 6, lines 40-54, col. 8, lines 31-54, col. 35, line 26-col. 36, line 56)

providing in a preselected manner for each of the plurality of users a portion of the directory of descriptive information which best matches the user interest profile of each of the plurality of users (providing program control information and/or advertisements that match information in user profile for suggesting/displaying to the

user – see include, but are not limited to, see include, but are not limited to, col. 6, lines 40-54, col. 8, lines 31-54, col. 35, line 26-col. 36, line 56).

Regarding claim 30, H536 discloses a method as discussed in the rejection of claim 21. H536 further discloses the target program/program information is divided into segments such as time slot, or 30 minutes segment, 15 minutes segment, etc. and targeted to set top box terminals based on historical viewing data and other data that is available at the network controller (see include, but are not limited to, col. 25, lines 1-10, col. 28, lines 1-15, col. 35, lines 6-20; H364: col. 34, lines 25-48). As a result of dividing the program into segments and transmitting those segments to the set top terminals, the target data items are transmitted in transmission, which utilize the information segments in order to reduce the effective bandwidth required for service.

Regarding claim 31, H536 discloses a method as discussed in the rejection of claim 30. H536 further discloses information segments of the plurality of target data items are prefetched in order to optimize transmission activities (e.g. download/suggest program information to subscriber prior to user request – see include, but are not limited to, col. 23, lines 50-60, col. 26, line 15-col. 27, line 67, col. 35, line 6-56).

Regarding claim 32, H536 discloses a method as discussed in the rejection of claim 31. H536 further discloses information segments of the plurality of target data items are prefetched based upon known location data relative to the plurality of users (e.g.

download/suggest program information to subscriber prior to user request based on user profile/user preferences/user history— see include, but are not limited to, col. 23, lines 50-60, col. 26, line 15-col. 27, line 67, col. 35, line 6-56).

Regarding claim 33, the limitations that correspond to the limitations of claims 21 and 29 are analyzed as discussed in the rejections of claims 21 and 29.

H536 further discloses automatically generating a user-specific directory of the plurality of target objects for each of the plurality of users, utilizing the user interest profile data, which includes only segments of the directory of information which are pertinent to that particular user (generating custom menu/program suggestion, or target advertisements which comprises only program information that match user interest data in user request/or user profile/user preferences, etc. – see include, but are not limited to, col. 14, line 53-col. 15, line 30, col. 25, line 1-col. 27, line 67, col. 29, line 15-col. 33, line 23, col. 35, line 27-col. 36, line 57).

Regarding claim 34, H536 discloses a method as discussed in the rejection of claim 33.

H536 further discloses:

providing updated directories of information related to the plurality of target data items (providing next menu or new menu and other information – see include, but are not limited to, col. 22, line 62-col. 23, line 15, col. 23, line 50-col. 24, line 11, col. 29, line 15-col. 30, line 30, col. 32, lines 34-61, col. 35, line 27-col. 36, line 57);

instructing particular affected ones of the plurality of data terminals to delete user-specific directories (instruct the particular set top terminal to delete or rewrite the program control information, menu templates, etc. previous stored at the set top terminal – see include, but are not limited to, col. 35, line 27-col. 36, line 57; H785: figure 10a, col. 25, line 25-col. 28, line 63);

upon detection of a request for directory information at a particular one of the plurality of data terminals, transmitting a new, updated user-specific directory to the particular one or the plurality of data terminals (see include, but are not limited to, col. 22, line 62-col. 23, line 15, col. 23, line 50-col. 24, line 11, col. 29, line 15-col. 30, line 30, col. 32, lines 34-61, col. 35, line 27-col. 36, line 57; H785: figure 10a, col. 25, line 25-col. 28, line 63).

Regarding claims 36-40, the limitations correspond to the limitations in claims 15, 18, 17, 19-20, and are analyzed as discussed in the rejection of claims 15, 18, 17, 19-20.

Regarding claim 41, H536 discloses a method as discussed in the rejection of claim 39, H536 further discloses transmitting to the terminal adapter, in response to the user inputting data at the terminal adapter to select one of the plurality of data items, data representative of a second of the prioritized plurality of sets of information segments of the selected one of the plurality of data items (transmit next or another menu to the set top terminal in response to user request/selection – see include, but are not limited to,

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col. 22, line 40-col. 23, line 15, col. 29, line 30-col. 30, line 30, col. 32, lines 34-60, col. 35, line 27-col. 36, line 57; H785, figures 11a-13b).

Regarding claim 42, H536 discloses a method as discussed in the rejection of claim 41, H536 further discloses transmitting to the terminal adapter, in response to transmission of the second of the priority plurality of sets of information segments of the selected one of the plurality of data items, data representative of at least a third of the prioritized plurality of sets of information segments of the selected one of the plurality of data items (transmitting to next menu in menu sequence to the user or transmitting another menu in response to user selection - see include, but are not limited to, col. 22, line 40-col. 23, line 15, col. 29, line 30-col. 30, line 30, col. 32, lines 34-60, col. 35, line 27-col. 36, line 57; H785, figures 11a-13b).

Regarding claim 43, H536 discloses a method as discussed in the rejection of claim 41, H536 further discloses transmitting to the terminal adapter, in response to user inputting data at the terminal adapter to request the entirety of the selected one of the plurality of data items, data representative of all of the prioritized plurality of sets of information segments of the selected one of the plurality of data items (transmitting to the set top terminal, in response to user request a menu (e.g., organized in particular category, or time, etc.) , all data associated with the selected menu is transmitted and displayed to the user - see include, but are not limited to, col. 22, line 40-col. 23, line 15, col. 29, line

30-col. 30, line 30, col. 32, lines 34-60, col. 35, line 27-col. 36, line 57; H785, figures 11a-13b).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over H536 as applied to claim 34 above.

Regarding claim 35, H536 further discloses time of day and date information to the plurality of data terminals to allow accurate scheduling and transmission (time and date in the program control information including program menu - see include, but are not

limited to, col. 22, line 40-col. 23, line 15; H364: col. 19, line 27-col. 21, line 20). H536 does not explicitly disclose the time and date information is sent periodically. Official Notice is taken that sending information periodically is well known in the art. For example, periodically sending program information to update to the program information stored at the receiver. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify H536 with the well-known teaching in the art in order at least to improve convenience in creating transmission schedule.

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Alten et al. (US 5,635,978) discloses electronic television program guide channel system and method.

Chaney et al. (US 5,515,106) discloses method and apparatus for transmitting/receiving a program guide for television services.

Payton (US 5,790,935) discloses virtual on-demand digital information delivery system and method.

Inoue et al. (US 5,729,280) discloses near video on demand signal receiver having a memory which provides for VCR like functions.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son P. Huynh whose telephone number is 571-272-7295. The examiner can normally be reached on 9:00 - 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher S. Kelley can be reached on 571-272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Son P Huynh/

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Primary Examiner, Art Unit 2424

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